

ABSTRACT

A system and method for optimizing dispersion in an optical transmission line is provided. The system and method comprise measuring the amplitude of a d.c. voltage component of a synchronously demodulated data signal of at least one wavelength channel by an in-phase carrier at the baud frequency of the wavelength channel. In an alternative embodiment, the system and method comprise measuring the IF amplitude of the resulting a.c. signal of a data signal of the at least one wavelength channel comprising a received RZ signal mixed with a local oscillator, whose frequency differs from the wavelength channel baud by a relatively small amount, somewhere on the order of about 100 kHz.